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SCHOOL AND SOCIETY

EDITED BY J. McKEEN CATTELL

Volume XXVII | SATURDAY, MARCH 24, 1928 | Number 691

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$5.00 A YEAR | PUBLISHED WEEKLY | 15 CENTS A COPY

THE SCIENCE PRESS

LANCASTER, PA. GARRISON, N. Y.

GRAND CENTRAL TERMINAL, NEW YORK CITY

Entered as second-class matter August 15, 1923, at the Post Office at Lancaster, Pa., under the Act of March 3, 1879

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SCHOOL AND SOCIETY

Volume XXVII SATURDAY, MARCH 24, 1928 Number 691

CAN HIGH-SCHOOL SUPERVISION BE MADE SCIENTIFIC?[1]

HIGH-SCHOOL supervision can not be made scientific without arduous labor. There are unfortunately some people who think that science is easy to inject into all kinds of situations. For example, a principal writes to a college professor as follows, "Our school has a six-period program; each period is 55 minutes in length. Do you think this program is too heavy for pupils of high school age?" The college professor who gets this letter knows that the principal who wrote it is in trouble with a local physician, or with the president and secretary of his parents' association. What the principal wants is a document that he can lay before his board with the statement that it comes from a scientific expert. There is a quieting effect on some boards of education in the words "scientific expert." The local physician is scientific; members of boards of education know about scientific business management. If the principal can get a pronouncement from someone far enough away from his town, he may be able to convince his board that he is operating under the sanctions of science.

I shall not pursue this matter of the correspondence between the principal and the college professor further lest it lead to revelations which probably ought not to be made public. My purpose is served if I add the statement that no one knows whether that program is too heavy or not until he has studied the situation with sufficient care and detail to arrive at a verifiable conclusion based on facts not supplied in the off-hand letter. The get-scientific-quick method of extricating one's self from supervisory difficulties may serve the temporary purpose of quieting an aroused community, but it is not a safe or valid method of scientific control for the schools.

There are some principals who are willing to go further than to write letters to supposed experts. They go so far as to take a summer quarter course or two in the science of education. They establish themselves after these courses on the firm ground of one of the leading scientific generalizations and begin operation. There came into my hands some time ago an application for a fellowship. The applicant was a high-school principal. Among the achievements which he enumerated as entitling him to favorable consideration was one on which he laid great stress, evidently considering it a mark of the most advanced training and an evidence of his determination to be in the front rank of educational scientists. He said, "Since I came to this school, I have completely reorganized the method of marking. Every teacher in this school now follows strictly the normal curve in distributing his or her marks."

I have a vivid picture in my imagination of the way in which the teachers in that school have been browbeaten into adopting the normal curve. I can see the pride with which this enthusiastic youth looks over the bookkeeping which he has perfected and reports to the neighboring county institute the unqualified success of his efforts to bring science into a situation which was

[1] Address delivered before the joint session of the Department of High School Principals of the National Education Association and the Department of Superintendence, Tuesday, February 28, 1928.

formerly conducted in utter ignorance of the findings of the best educational research.

I trust that no one will misunderstand my position. The normal curve is a most useful instrument in the hands of one who understands its value. I know of no more stimulating method of inducing teachers to study the whole problem of developing an equitable system of grading pupils than to have them compare the distribution of their own marks with those of other teachers and with the normal curve. On the other hand, I know of nothing more stupid than to dictate as a matter of invariable rule that the normal curve shall be followed rigidly by all teachers in the distribution of their marks. The trouble with the young applicant whom I quoted is that he had too slight an acquaintance with the normal curve.

It would be possible to offer an endless number of examples of what may properly be called ignorant enthusiasm for the science of education. The latest which came to my attention was in the form of an article submitted for publication to the *School Review*. The article in question was written by a professor in a university department of modern languages. He had evidently participated in some of the testing initiated by the national commission in charge of the modern language inquiry. Evidently also, he had never heard of the long labors by which educational tests in other fields have been refined. He wrote in glowing terms of a new educational era when other subjects in the curriculum will adopt the practice which the modern languages have found to be productive, namely, the practice of judging the success or non-success of instruction by tests. He pointed out that tests will show any teacher exactly how the results secured in his class compare with results secured elsewhere. The writer of this article urged all schools and colleges to use tests. The author evidently felt it to be his duty to bring the overwhelming importance of tests to the attention of a hitherto unenlightened public. Our editorial board considered seriously publishing this article as a means of introducing a little humor into the sometimes too somber pages of *The School Review*.

There would be very little justification for the present paper if it could contribute nothing but examples of the misuse of the science of education. I have ventured to report such cases as I have cited because I believe the science of education is in critical need of a kind of support which the great body of administrators do not fully understand. The science of education requires at this moment the expenditure of an enormous amount of energy. The science of education is understaffed and undersupported. The number of workers who are attempting to carry on educational research is pitifully small and wholly inadequate to the demands. I have thought of this occasion as a strategic opportunity to make a plea for a new type of support for the scientific study of high school problems. I shall try to persuade you that the high schools of this country must think of their task in a new way. I shall try to convince you that it is expedient and economical for high schools to become centers for the scientific study of the problems of adolescent education.

Let me be concrete. I remember some years ago visiting the New York City High School of Commerce when the late Mr. Shepard was principal. There was a record in the principal's office of the activities of each of the teachers in the school. The record showed what subjects the teachers taught, how many pupils were in each class, how many pupils passed and failed, and so on. There was one item in the record which interested me very much. It showed how many pupils in each class elected a related subject during the year

following instruction by a given teacher. I was interested in this item because it revealed very clearly the fact that some teachers influenced their pupils positively while others did not. I recall that there was one teacher of mathematics whose pupils in large percentage went on with advanced courses in that field and that there was another teacher working under almost identical conditions as to subjects of instruction and numbers of pupils whose influence was almost zero as shown by subsequent elections.

It required some energy to compile the records to which I have referred and there were several items on which information was collected year after year which did not seem to be as significant as the one which I selected for special comment. The energy required for the compiling of the record undoubtedly lessened the amount of time which someone could expend in supervising extra-curriculum activities or in holding conferences with parents or teachers or in performing some of the other duties which principals ordinarily think of as normal routine. I do not hesitate, however, to assert that such careful and complete records kept in every school in this country would give an objectivity and precision to high school supervision which are at present largely lacking.

Why is there so little work done in high school offices in the preparation and study of scientific material on which supervision is to be based? We all know the excuse commonly offered. It is said that there are no funds available for such records. Or it is said that the principal is so fully occupied that he can not find time to think of such matters.

At the risk of making a statement that will not be palatable to some of the members of my audience, I shall say what I believe to be true and I shall depend on your good nature to hear me through in the hope that we may ultimately part on amicable terms. It is my firm conviction that the reason why high schools are not scientifically conducted is not that resources or time are lacking but that high-school principals are as a class uninterested in scientific methods of investigation. It is my belief that if principals were scientifically minded, they could persuade communities to provide the necessary energy to put high-school education on a thoroughly sound and valid basis.

In making this assertion, I do not for a moment overlook the fact that the high-school principals of this country are a highly educated and highly intelligent group. Many of them are thoroughly grounded in literature and history and some are productive scholars in mathematics and physics. They were, in many instances, transferred overnight from the field in which they were doing effective work as teachers and were transformed into principals without being changed internally in any respect. The result is that they do their thinking, when they indulge in that higher form of intellectual exercise, in the fields of literature or physics and they carry on their activities as supervisory and administrative officers with no more special skill than would be brought to the task by ordinary men.

What I am saying does not imply that these non-scientific principals are failures in conducting their schools. Quite the contrary, many of them are men of such good sense that they find what seem to be in most instances adequate solutions of the problems which arise among teachers and pupils. The solutions which are adequate are, however, seldom of the type that can be defended as well founded on scientific grounds. The high schools of this country are, for the most part, conducted with the best of intentions and with a high degree of success but by methods which are only vaguely defined and often quite tentative and fluctuating.

The remedy for the present situation does not lie in mere individual change of attitude. If some principal becomes aware of the necessity of finding scientifically defensible grounds for his action, he immediately discovers that he is an isolated individual. There is very meager information about the practices of high schools in general to which reference can be made by any individual who begins to study high-school problems.

Let me cite a few cases in point. It has recently been said of American high schools that they administer curriculums which are "ropes of sand." This rhetorical phrase is, I admit, somewhat vague. I am interested in emphasizing the fact that when one begins to refute the charge, one finds in the literature of high-school supervision very little definite material with which to answer or confirm what is said. An answer from a single school is inadequate. We ought to know much more than we now know in a definite way about the extent to which the studies pursued by individual high-school pupils really weave themselves into coherent curriculums.

Again one hears the statement that there is here and there an overlapping of teachers. What constitutes an oversupply? How does an oversupply in one city—assuming that it exists— affect the supply in other centers?

Additional examples of uncertainty in regard to the conduct of schools appear when one tries to find out what are the relations of a high-school principal to the city superintendent of schools. Or what are the relations of a principal to his teachers in such matters as the determination of the methods which shall be followed in the classroom, in the disposition of disciplinary cases, and in so fundamental a matter as initial appointment.

There must be broad general principles to which appeal can be made in dealing with matters of the various types mentioned. These broad general principles can not be ascertained through purely personal endeavor. The profession must address itself as a body to the study and scientific solution of the general problems of high-school administration and supervision. A thoroughgoing science of education will be possible only when cooperation is established on a sufficiently broad scale to supply a vast body of energy and full use of the facilities for experimentation furnished by many high schools.

At the present time there are a few men in scattered university centers, in state departments of education, and in a few isolated high schools who are carrying on studies on the margin of time left after performing other duties. Each man does a small piece of work periodically and timidly publishes his results. The stream of common practice flows on very little affected by these side eddies. The magnitude of the educational enterprise is enormously great, the magnitude of the scientific output is relatively insignificant.

Very often scientific research is seriously limited by the fact that the man who would be interested in carrying on the research is without the authority necessary to permit the work. Colleges of education have tried in many instances to secure opportunities for scientific work by organizing schools under their own control. Individual investigators have often found themselves so entangled in red tape and so inhibited by tradition that they have been completely blockaded in their inquiries.

The fact is that schools are organized as operating concerns. Means for the study and criticism of school operations have not been provided as a part of the routine. This appears in the fact that an ordinary principal of a middle sized high school has more distracting duties than would be assigned in industry to any kind of a supervisory officer. While industry has learned to set up well equipped laboratories and to

guide its activities by the exercise of the most drastic scrutiny of its results, schools have been asked by the public to use every ounce of available energy in operation. If fifty new pupils come to a high school, the board of education may employ a new teacher but it will certainly not think of providing an assistant to the principal. Among the new pupils there may be problem cases which call for careful diagnosis; some of the pupils may come ill prepared and be, for this reason, in need of special attention; they may be undecided in their interests and in need of training of a type not commonly provided in the school. Does the community supply expertly trained research people to study the fifty new pupils? Not at all. It is commonly believed that the principal who is now dealing with seven hundred pupils can take on fifty more without any recognition of the fact that his duties have been increased.

The public is not wholly to blame for its attitude. Very few principals have ever asked for facilities with which to make a careful study of teachers and pupils and the public does not know that teachers and pupils need to be studied. I must repeat in substance what I said a few moments ago. The profession must become scientifically minded or the schools will continue to be supervised on the basis of purely personal judgments.

Since I have urged the profession to take up scientific studies, it may be thought that it is my duty to outline plans which will insure the achievement of the end which I have advocated. I have several concrete suggestions to offer.

First, I suggest that high-school principals develop as frequent opportunities as they can for conferences with one another regarding the problems which they encounter and regarding successful devices for meeting these problems. Principals in neighboring communities could very advantageously meet at least once a month and ask one another regarding such a matter as their respective methods of judging teachers. President Eliot is said to have formed his judgments regarding the teaching ability of members of the Harvard faculty by reading the examination questions which these teachers set for their classes. A canvass of the school supervisors of the country would undoubtedly bring to light a number of other useful plans. My colleague Morrison has suggested that the extent to which a teacher holds the attention of his or her class is an objective indication of the degree of the teacher's success. Principals could well afford to spend much time and energy gathering suggestions of this type.

Another question which principals might discuss in conference is the question of how far the results of tests are to be used in rating teachers. I know one great school system which holds that the results of tests are not proper bases for the rating of teachers. It is argued that the individual teacher is not responsible for the kind of pupils that are sent to his or her class through promotion nor for the curriculum which is required to be administered. Why, then, should the classroom teacher be responsible for the results of tests? It is the obligation of the central office to adjust matters if pupils are found to be deficient. In direct contrast with the attitude of the school system to which I have just referred is that of another system where the curriculum is assumed to be correctly standardized and where promotion is thought of as properly adjusted. In this second system, teachers are rated strictly in accordance with the showings made by their pupils on the tests arranged in the central office. I can think of nothing that would furnish a more appropriate theme for a principal's conference than the problems suggested by this contrast in attitudes on the value of tests.

In suggesting that principals meet and discuss such questions as those proposed, I

am not assuming that the science of education will be directly advanced by the early meetings. I am confident, however, that after men have discussed such questions, there will very soon develop an interest in supervisory problems which will inspire the participants in the discussion to seek objective evidence on which to base decisions and practices. There will begin to appear a scientific mind which is essential to participation in the productive study of school problems.

My second suggestion is made in the belief that a scientific attitude once established will seek and find means of promoting widespread research. I suggest that principals go about the task of converting boards of education and the public to an understanding of the fact that decisions about school policy should be reached in the light of facts. We are in a period of serious jeopardy to school interests. The expenditures for schools have come to be so vast that all kinds of sinister forces are beginning to seek places in the councils of public control of education. Conscientious educators are so busy with their daily tasks that they seldom take the time to show the public the real character and complexity of school supervision and management. The result is that the public consumes the energy of school officers in meeting trivial demands. The public seems blind to the fact that absorption in petty details interferes with the real interest of pupils. The principal of a high school who with sensitive conscience gives all his time to answering miscellaneous office callers is not really serving the public as he should. As the leader of the school, the principal ought to take time to plan for the development of the institution and he ought to devise ways of convincing the public that he is serving them when he works behind closed doors. The principal ought to prepare reports which will keep the public reading.

In direct line with this suggestion is another of like import. The public ought to pay for expert research assistance in every school. There is nothing so convincing to the public as a draft on its purse. The public will not understand and appreciate educational research until it has paid for it. At present, the public pays most of its money for teaching and appropriates only a small amount for supervision. The public pays outside of the schools a great deal for science. I have waited in the outer office of my oculist, as I dare say the rest of you have done, and I have contemplated with respect the difficulty of securing his services and the amounts which he is likely to charge me. I have noted the eagerness with which people await their turns. He is a scientist. When he decides that I do thus and so, I do it. I have been unable on occasions when holding such meditations with myself to avoid contrasting the way in which the scientist disposes of people with the way in which people impose on educators. I repeat what I said a moment ago. The public must be taught to pay for expert research of high-school problems. I suggest that every high school with ten members on its faculty employ an expert to gather information about teachers, pupils and curriculum and pay for a superintendent's time enough to insure that the scientific work which I have advocated be done. The public is getting less education for its present investment than it should. The public deserves to have its educational problems subjected to the most critical study. Let us give the public what it needs.

One of the chief reasons why a school should be supplied with time for scientific study of its problems is that records may be kept which will make possible comparisons of different schools with one another. One of the most striking indictments against the high schools of this country is

that they demand of the colleges that credentials of graduates shall be asked for only on uniform blanks but they do not, so far as I know, exhibit the slightest interest in uniformity of records in any other connection. High schools have their private methods of registering pupils, of reporting grades, of keeping account of discipline, of crediting extra-curriculum activities, and of recording the activities of teachers.

The financial officers of schools long ago discovered the advantages of comparisons which are made possible because of the existence of uniform methods of bookkeeping. Principals seem to be wholly unaware of these advantages. The highest ambition of each high-school principal seems to be to invent a new blank on which academic records are to be recorded. I know a great city in which the high schools of the single system are so divided in their practices with regard to records that scientific studies through comparisons are impossible, even if there were any one in that system interested in the science of education.

The high-school principals of this country will some day keep uniform cumulative records of their schools. Even a change in administration will not result in a destruction of records or a break in the continuity of standard information. The profession as a whole will dictate first as a matter of response to the demand for public information and second as a contribution to scientific studies that academic officers do as well as financial officers and as well as the best public utility corporations. It is an astonishing fact that it is impossible in many high schools to ascertain what courses of study were offered ten years ago and even more impossible to find out how many pupils elected certain subjects four years ago. The state of public high-school records is chaotic beyond all possible defense.

My next suggestion is a negative one but it is offered with all the emphasis that I can put into words. High-school principals should not expect educational science to be brought to them in the form of simple rules of conduct which are merely to be followed. Projects are undoubtedly good when they are genuine, but there are times when school work can not be cast in the project mould. New type examinations are very useful when one wants an objective measure of the extent to which pupils have absorbed one hundred items of information. There are occasions, however, when an examination should test the pupil's ability to formulate a train of ideas into a coherent discussion. On such occasions, the new type examinations should not be used. He who is truly master of scientific research will not think of projects and new type examinations as devices to be used without discrimination. Science is above all analytical and discriminating. He who would use science must become critical and discriminating in his own personal thinking. The science of education is a stimulating body of thought. It is not a series of rules to be slavishly followed.

I picture to myself the future principal of a high school, the man who fulfils in the most complete measure the injunction to approach his task as a scientist should. This man will be equipped with such information as others have collected and made available in educational literature. He will know the types of pupils who have been measured and described through tests and laboratory experiments. He will understand the various learning processes by which pupils respond to instruction in different departments. He will be acquainted with the discoveries that have been made in regard to methods of teaching. He will be familiar with the devices of supervision used by his fellow principals. He will be employed by a board of education who will say to him that it is not his duty to cater to the wishes of every parent and teacher. He will have time to use his scientific train-

ing and he will approach each of the large problems that confront him as his professional colleagues, the doctor, the lawyer, and the engineer approach their problems. He will have a reasonable number of assistants and he will be responsible for results of a superior type.

I am frank to say that I do not expect to find this type of principal where men have been catapulted late in life into supervisory office after spending their best years specializing on Virgil, or physics. I expect to see the principalships of this country occupied by men trained in the methods of scientific supervision. Then supervision will become scientific exactly as all the other modern undertakings have become scientific because they are in the hands of competent men who have learned that success depends on the collection of objective facts, on the derivation of broad principles of action from these facts and on the discriminating application of these principles to the emergencies of practical life.

CHARLES H. JUDD
UNIVERSITY OF CHICAGO

A STATE'S MESSAGE ON VOCATIONAL EDUCATION

IN what I have to say regarding vocational education, I wish to attempt two things: (a) to present a point of view and (b) to sketch a state program. First, in order to think clearly on as broad a subject as vocational education, it is necessary for one to set in order the furniture of his mind. Unless this is done there can be no effective realization of a group of state objectives.

Since I know one state best, I shall therefore use it as a background for my discussion. From a state point of view there can be no necessary antagonism between what is called "liberal," "general" or "cultural" education and the specialized forms of education denominated as vocational, trade and technical education. The various forms of educational activity in which the state is engaged, as its purposes are expressed in our tax-supported schools, resolve themselves into matters of relative emphases and objectives. For specialized vocational training is not a matter of the material used, but one of aim or purpose in its use.

If we regard as vocational education those types of activity and the use of such material for instruction as shall prepare a person to pursue successfully a useful occupation, we have set up a definite goal. If, on the other hand, we organize instead the educational processes so that a person shall not thereby gain a marketable skill in any special field, but rather become familiar with a broad area of human experience through science, literature, art, history and language, and through various contacts not excluding some experiences with concrete material, by a study of practical arts, if, I say, by these means a person becomes able to adjust himself easily to new situations, we are providing for a cultural or liberal education. In that general education we may be teaching practical or industrial arts and using perchance the same materials and processes as we are using in the study of a given vocation, differing only in ultimate objective and hence in the degree of skill desired. Our goal here is understanding and appreciation for purposes of utilization and not for production. We are widening our area of adjustments.

Otherwise stated, in general education as pursued in elementary school, secondary school and college, we seek to prepare people to make effective new adjustments with their environments. And these environments are made up of material things, institutions, people and ideals.

Vocational education, whether on the level of the professions, the semi-professions or as represented in trades, deals with the development of specific skills, and

with the understanding of relations which should accompany the process of acquiring those skills.

The state is concerned with the general welfare of its citizens and realizes that this welfare may be secured through various channels, hence from its point of view there can be no antagonism between liberal education and vocational education, as defined above.

Our national objectives are expressed in the preamble to the Constitution as clearly as are those of Japan in its Imperial Rescript. Our schools, therefore, as one agency for the realization of these ideals, attempt through their different types of organization to provide for an equity of educational opportunity. The social and industrial separations that result are on the basis of personal choice and association, and by reason of individual merit, and are not a necessarily determined class system based on perpetuating industrial or vocational castes.

What the state seeks is (a) to provide an economic opportunity and (b) to defend the rights of the person in the securing of that opportunity, and if necessary to defend the individual from the state itself.

Furthermore, the state is concerned with the industrial and economic welfare of its people as a whole, and not in a particular industry or occupation, except in times of great crises, such as the world war.

Time does not permit a discussion, all too familiar, in these days, of the gradual disappearance of the apprentice system, and the gradual taking over by the school authorities of those responsibilities which were once assumed to belong to industry exclusively. The schools have responded tardily but surely. All this means a broadening conception of the function of public education.

In our high schools practically one third of the enrolment is studying some one of the commercial arts. Home-making education and agriculture are appearing as activities in greater numbers of high-school curricula. In some quarters these changes are viewed with apprehension. Persons in this state of mind do not realize that new conditions require new instrumentalities. Hearing new voices many are alarmed and say that we are destroying educational standards. It may be that artificial and abstract metaphysical entities are less clearly seen, but that does not mean that real education is any the less effective. New administrative machinery may be installed, new methods devised and new adaptations provided, all to meet a changing world which the school must prepare its pupils to enter.

What the emphasis upon vocational education does is to make clear the narrowness of vision which has attempted to delimit the idea of school. The vocational emphasis has brought the abstract and bookish character of the school into apparent conflict with the practical and the utilitarian. Without careful reflection one is likely to think that we are dealing here with two mutually exclusive kinds of education. The emphases may be opposites as between general and vocational education, but in the mind of the state with its responsibility for the educational interests of all its citizens, the types are complementary and not contradictory.

The life of an individual is a unitary process, and these aspects of his education are but as segments of the same circle. Take for example the city directory or popular "Who's Who." We find listed there

Jones—
Eugene—polisher
Fred—blacksmith
Charles—toolmaker
William—house painter
Stephen—watchmaker
Joseph—attorney-at-law

Here convention and society have classed

the Joneses by their vocations. It may be that society through its schools has helped to produce these differentiations of occupational choices. This is the vocational idea applied to citizenship.

In this particular directory classification nothing is said about any one of the Joneses as a gentleman, as a neighbor, concerning his recreations, about his friends, his social contacts and citizenship obligations. All these enter into his life in differing degrees, and the school makes its contribution to what we call a man's effective citizenship. Ruskin puts it thus: "It is doubtless culture that gives value to vocation, and it is true that vocation makes culture possible."

The state in its educational program must recognize no artificial restriction, and at its peril, regard its citizenry as mere hands rather than as skilled workers. Its general and vocational phases of public education must be so coordinated as to aid in preparing its people to sustain an industrial as well as a political democracy. What we are coming to call adult education will aid in giving those who are not now in schools some acquaintance with the capacities and ideals of mankind, as expressed in art, literature and music, some knowledge of human achievement and ambition as told in the story of history, and some interpretation of nature through opportunities to study science. Work of this character is found in our schools of general education, and in some measure in the related work of vocational education.

My purpose thus far has been, as stated at the beginning, to attempt to make clear a point of view. With this clearly defined the next thing is for a state to so organize its administrative machinery as to make its plans effective. If it has schools for general education then it should be with the objectives of general education that the school should concern itself, and measure its product accordingly.

If it operates vocational schools to train for useful employment, then that is the objective, and unless those who complete its courses can sustain themselves in that for which they have been trained, to that extent the school has failed. In any event, educational authorities must always apply the touchstone of purpose, and see that each type of educational procedure seems true to its goal.

As to the administrative machinery in carrying out a program of vocational or trade schools—in this respect states differ. Referring again to Connecticut, we have there practically two systems of schools when viewed administratively, a town-state system and a state-town system. In the former, the town-state system, there is a minimum of state control of educational processes and of financial support. There is, however, general supervisory oversight by the state. Here we find the elementary schools and the high schools, schools primarily for general or cultural education. The state does not administer these schools. They are local schools.

On the other hand, we have the state-town system, wherein the state through its State Board of Education organizes, supports and administers trade or vocational schools and also normal schools. Both these types of schools are supported by state funds almost exclusively, and such local money as is used is in terms of providing a building free with light, heat and power, and in the case of the normal schools providing practice schools, which are a part of the town school system. The state trade schools are administered through an administrative division of the staff of the State Board of Education, and the funds are provided by the General Assembly. In the location of a trade school the state is concerned with the provision of an educational opportunity for its youth, and is not governed solely by the possibilities of the absorption of the graduates of a given school by a particular

industry. This does not mean that a dominant industrial interest of a section of the state is not to be taken into account, but it does mean that the state is not primarily interested in supplying hands at the employment gate of a given concern. The education is for the benefit of the boys, not of the factories.

I turn now to the state's program.

The development and growth of trade or vocational education in Connecticut may be traced to the fact that the State Board of Education was empowered by statute in 1907 to establish trade schools for instruction in the arts and practices of trades and vocations, and to draw upon the State Treasury for funds in support of such schools.

Thus effective leadership was early established, with the State Board of Education as the initiator and not what might have been the case under other circumstances and conditions, an ineffective secondary agent, even though a good adviser.

As early as 1909 and 1910 the philosophy of trade and vocational education as a public function had not matured; it was hardly in the experimental stage, and little could have been expected in the way of intelligent effort on the part of local communities to initiate and, much less, to promote such education effectively.

The cost of equipping and operating a trade school would have proved a burden to any but the most wealthy communities, irrespective of how the need of the youth in such communities for effective vocational education may have been regarded as desirable if not essential.

Under state control, with the costs met from state funds, the State Board of Education was in a position to set up certain objectives and create the organization to attain them. No conflict of ideas would endanger the project, and such successes as came from a unified effort would be made known to all the people since the law provided that the State Board report to the Governor and to the Legislature, concerning the effectiveness of the plan.

The philosophy back of the law has, in the minds of the people, proved correct, because they have seen the schools develop, grow in importance as an integral part of the educational system of the state. Evidence of a most significant unity of effort is found in the fact that cities and towns have built suitable buildings in which to house the schools, rent free to the state, with power, heat, light, water and janitor service.

No city or town to-day thinks of organizing a trade school as a local institution. They urge the State Board to come into their city or town and organize a state trade school, the consensus of opinion being that operation under the authority of the State Board of Education has been shown to be increasingly effective, where under local management the school would be much less effective.

An important factor in the success of the state trade schools is that they are free to any person 14 years of age or over, resident of Connecticut. The opportunity of attendance is facilitated through payment of transportation by towns sending students, the state reimbursing the town one half that cost, up to $35 per student per year. This reimbursement is the same as for the attendance of non-resident pupils in high schools. It follows, therefore, that while the Connecticut system may be unique in that the state trade schools are under the direct management of the State Board of Education, and that they are supported out of state funds, and from general taxation of all the people, the people of the state have access to the schools no matter in what part of the state they live.

In 1917 Connecticut accepted the provisions of the Federal Act for Vocational Education popularly known as the Smith-

Hughes Act, and organized classes of vocational agriculture and of vocational home economics as well as classes for the preparation of teachers of trade and industrial education, agriculture and home economics.

An important administrative feature is in the application of Federal funds; for, as the state pays all salaries and other expenses from state funds, and expends approximately $7 for each dollar received from the Federal Government, Federal funds thereby become in part a reimbursement to the state. The amounts received from the Federal Government it is believed are applied more effectively than would be the case if paid out in small amounts to many city or town schools.

So much for the plan of organization and control. The important point is, how effective is the preparation of the students? Instructors are selected from the trades. They must have served a complete apprenticeship and have worked at least three years at the trade as a journeyman. Personality, character, adaptability to teaching methods, are necessary qualifications for a successful teacher. Each instructor is required to enroll in the teacher-training course and to complete the work required, and then as a teacher to apply the methods there learned in meeting the needs of the students.

State schools are located in ten strategic points throughout the state. Two more schools, one at Hartford and the other at Willimantic, will be opened this year.

Nineteen different trade educational activities are now carried on. The student hours recorded for the year ending June 30, 1927, total 2,519,058. If this number were divided by 8 hours, the length of a school day, it would represent 314,000 student days; and these hours are from all-day, part-time trade extension or employed apprentices, cooperative high school and trade school, and also evening students. The budget for this year amounts to $715,000, in which is included an item of $130,000 representing the products to be sold and pupil's labor.

It is the purpose of the trade school to teach a boy a trade, to equip him to enter industry, capable of rendering therein efficient service. He appreciates his acquired skill. He has developed a thoughtful attitude that stimulates his ability to reason logically from cause and effect through the progressive stages of his work assignment—and all because of his interest in his task. This interest is aroused early in his course, because from the beginning the academic and related subjects are made an integral part of his work experiences.

Trade-school opportunities are for those who seek what the schools have to offer, and only those who have the intelligence to pursue secondary education subjects can hope to take entire advantage of their opportunities, even though they may discontinue high school with its academic subjects because of lack of interest in them.

The trade schools are not organized for the purpose of relieving local public schools of their responsibility to children of low mentality, or of their duty to organize special classes for such children, and to employ especially trained teachers for them.

Vocational education has a fixed place in the educational program of the state. The practical and concrete character of the instruction creates a strong appeal to the interests of youth. Construction and useful work processes dignify accomplishment, and have an intensive value in the usefulness to society of objects created for pleasure as well as things only necessary for existence. Vocational education helps to relieve the mind of anxiety as to what one will do to earn a living. Culture need not be absent from the grasp of youth, who through an appreciation of the refinements of craftsmanship learns to credit society for his opportunity to acquire education and valuable craft experience, and so appreci-

tion leads to better understanding of his duty as a citizen. Connecticut believes in liberal and in vocational education. The former it supervises in a general way, and supports only incidentally. The latter, vocational education, it believes can best be operated as a state responsibility. In any event, the outcome is the same—a self-supporting, intelligent and cooperative citizenship.

ALBERT B. MEREDITH
COMMISSIONER OF EDUCATION
FOR CONNECTICUT

EDUCATIONAL EVENTS

THE SIZE OF CLASSES IN ENGLISH PRIMARY SCHOOLS

IN answer to a question in Parliament, as reported in the *Times Educational Supplement*, Lord Eustace Percy stated that there were on March 31 last 43,094 classes with between 40 and 50 pupils on the roll, 19,934 with between 50 and 60, and 278 with over 60. These figures show an increase of 200 in each of the first two grades and of 36 in the last upon those of last year, when the number of classes with above 40 pupils formed 42 per cent. of the whole. The great fall of nearly 4,000 in the number with between 50 and 60 pupils occurred in 1924-25, with a corresponding increase in the number having between 40 and 50 pupils of nearly 3,000, and, curiously enough, an addition of 140 to those with over 60 pupils. The next year saw a fall in all three grades, which it is to be hoped this present year will show to have been resumed.

The younger children have an undue share of these large classes. Of the classes with over 60 pupils 79 per cent. consist entirely of pupils under 11 years of age, and 50 per cent. of the 73,600 classes consisting of these young people have over 40 pupils on the roll. Of the 40,000 classes containing pupils under and over 11 years of age 40 per cent. contain over 40 pupils, while when we come to senior classes containing only pupils over 11 years of age the percentage of larger classes falls to 26. While five sixths of the classes of younger children consist of both boys and girls the proportion fall to one half in those containing pupils under and over 11 years, while of those with pupils entirely over 11 years rather more than one third are mixed.

Lord Eustace Percy is said to have made the reduction of the number of classes with over 50 pupils one of the main aims of his administration, and he can claim to his credit a fall of nearly 5,000, one fifth of the number existing in 1923–24. Incidentally a suspicion that in some areas he was attempting to raise the size of the average class to something nearer that index number has found expression in the conference resolutions of more than one association. The present position is not such as to justify any slackening in the agitation for this reform. There is an aspect of it, however, which is not always regarded. So long as these large classes exist they call for the undivided attention of the most skilled teachers. Of the 63,000 here under consideration fewer than 50,000 are in the charge of certificated assistant teachers. The 10,500 uncertificated teachers, nearly one third of the whole in that category, who are similarly saddled, may well claim, as they often do, that they are being inadequately paid. For if the value of their services is rightly assessed by the lower salary received by them, then they should not be entrusted with the care of the largest groups of pupils.

THE CANADIAN STUDENT AND AMERICAN COLLEGE ENTRANCE CREDITS

WITH the increasing number of Canadian students applying for admission to colleges and universities in the northern part of the United States, the problem of their entrance credits is becoming one of importance. A paper on this subject read by Mr. E. B. Stevens, registrar of the University of Washington, before the Pacific Coast Association of Collegiate Registrars is published in the current *Bulletin* of the American Association of Collegiate Registrars.

Absolute following of the Canadian system of examination is advocated by Registrar Stevens, who points out that "to attempt to graft the accrediting system on to the examination system of Canada would be a grave mistake. Under accreditation, there must be inspectors and the re-

port of an official board. Manifestly, it would be unwise for an official in one country to pass upon the schools of another. If it were not meddling impertinence, it would lack authority."

After paying tribute to Canadian students who "so often have been conspicuous for their scholarship," Mr. Stevens advises caution about acceptance of Canadian junior matriculation certificates for American college entrance. In Canada the public-school course is eleven years in length, the last three being devoted to the high-school course of study. The junior matriculation certificate is received at the end of the three-year high-school course by those who take the junior matriculation examination to enter the liberal arts college of Canadian universities. Mr. Stevens points out that this junior matriculation examination certificate, while it admits to the usual four-year liberal arts curricula in Canada, is not accepted for the four-year applied science curricula of the Canadian universities. He might have added that few students are admitted to the honors courses of Toronto and McGill on the junior matriculation basis.

For entrance to applied science and honors courses, Canadian students put in an additional year in their high schools and then present themselves for senior matriculation examinations, based on a program of studies outlined for the twelfth grade or the fourth year of high-school work.

Mr. Stevens quotes Walter A. Payne, recorder and examiner of the University of Chicago, as saying: "Personally I do not believe that junior matriculation, or the certificate of the Ontario middle school, represents the equivalent of graduation from a standard American high school." An investigation made by the University of Utah was cited as showing that, of ten universities in the west and northwest, six gave certain advanced standing in college for the Canadian senior matriculation examinations. A fair but conservative attitude by American registrars is the final advice of Mr. Stevens.

THE SUMMER SCHOOL OF NEW YORK UNIVERSITY

THE thirty-fourth session of the summer school of New York University will open on Monday, June 9, and will continue until Friday, August 17, according to an announcement made by Milton E. Loomis, director of the school. The curriculum includes 402 courses, which will be given in forty-eight different subject groups, an increase of nearly one hundred courses over last year.

Dr. John W. Withers, head of the school of education, will serve as dean. The faculty of the school will be composed of 261 members, including 200 members of the faculty of the university. The balance is drawn from educational institutions throughout the United States.

The work of the school will be given largely at the Washington Square Center, where there are facilities for upwards of 15,000 students. The courses in physical education will be given at a camp on Lake Sebago, near Bear Mountain, New York. A group of courses in education required for supervisor's certificates will be given at Oswego, New York, in cooperation with the vocational and extension division of the State Department of Education. Courses in education will also be given at Chautauqua, New York.

The summer school has become an integral part of the regular program of the university. Its purpose and function, according to a statement made by Dr. Loomis, have changed, the courses which are to be offered this year being identical with the regular curriculum and being taught for the most part by members of the faculty. The student body is composed almost entirely of regular students pursuing a course leading to a degree. Dr. Loomis also pointed out that both graduate and undergraduate work will be given during the summer and that through the means of successive summer schools many teachers will be enabled to take the work necessary for a higher degree.

A number of courses of special interest are included in this year's curriculum. A symposium on higher education will present important developments in the determination of the policies, organization, financing and administration of colleges, universities and professional schools and the significant efforts that are being made toward improvement of instruction in these institutions. This course will be headed by Dean Withers in collaboration with Chancellor Elmer Ellsworth Brown, Dr. Robert Lincoln Kelly, executive secretary of the Associa-

tion of American Colleges, and others. A practical course in journalism for the high school will be offered which will include the editing and makeup of high-school journals together with printing problems, editorial policies and marketing methods. Modern sociological problems will be studied in the various courses given by Professor Rudolph M. Binder and Associate-Professor Clarence G. Dittmer.

Professor Somerville, who has for years conducted a laboratory of play production in connection with the Washington Square College Players of the University, will give a course for teachers in educational play production. This course will be conducted largely by the laboratory method.

"Music for the laymen" is the bulletin description of a course entitled "The Appreciation of Music."

Courses will also be given in accounting, banking and finance, biology, business English, business law, chemistry, classics, dramatic art, economics, English, French, geology and geography, German, government, history, journalism, management, marketing, mathematics, music, philosophy, physics, psychology, public speaking, retailing, sociology, Spanish, trade and industry.

In addition to the above an extended curriculum in education, courses in which are primarily for teachers, is offered. The following subjects are represented by one or more courses in education: Administration and supervision, art, college, commercial, psychology, sociology, elementary, English (teaching of); experimental, history, mathematics (teaching of); music, normal school and teachers college, personnel administration (philosophy of); physical, religious, science (teaching of) secondary; social and vocational.

The students who come to New York City this summer to enroll in the summer school of New York University will find ample opportunity provided for them to see the many interesting points of the city and environs and many side excursions and sightseeing tours have been arranged.

Two university dormitories will be open for occupancy together with seven hotels located in the Washington Square district. Board and room can be obtained under university auspices at very reasonable rates. Students will also have the advantage of the service offered by two employment bureaus, which will offer assistance to students in obtaining positions.

A PROPOSED SALARY DIFFERENTIAL FUND FOR THE UNIVERSITY OF NORTH CAROLINA

IN his annual report to the board of trustees, President Chase, of the University of North Carolina, focused attention upon the necessity of greater flexibility in the faculty salary scale. He calls attention to the following report made by the visiting committee last spring:

In examining the changes in the faculty we have been impressed with the constant difficulty the university experiences in retaining the services of so many of its distinguished teachers in the face of competition from institutions in the North and Middle West—institutions ranking no higher in the academic world than our own, but able to offer larger salaries. Under such conditions we are in unusual danger of losing our best men.

The way to meet this situation, it seems to your committee, is not by raising the general salary scale but by a method analogous to that of the present Kenan Foundation. By means of income from that foundation the university is able to reward distinguished service by raising certain salaries above the normal. But these funds are not sufficient to care for the number of men who amply deserve this recognition. We recommend, therefore, that in the maintenance funds of the university there be set up a "Salary Differential Fund" to be administered by the president and trustees in some such way as the Kenan Fund is now administered to reward unusual merit or to meet emergencies in the problem of retaining our faculty.

In our opinion maintenance funds for the coming year are not sufficient in the face of prospective needs to set apart such a sum for the year 1927–28, and accordingly we recommend that the setting up of this fund be adopted in principle now with the purpose of setting up such a "Salary Differential Fund" at your earliest opportunity.

With the change in living costs, as marked in Chapel Hill as anywhere in the country, and with the increased opportunities for places due to the rapid growth of colleges and universities everywhere, the salaries paid the better men in educational institutions have steadily increased. For such men, we are distinctly below the rates of institutions of our type generally. Our Kenan Fund, valuable as it is, can not by itself suffice to recog-

nize service of value and distinction in a faculty as large as that of the university to-day. In a small institution such as the university when our present methods of dealing with salary increases were adopted many years ago, there is much to be said in favor of salary scales more or less automatic in character. In an institution of character and complexity of the university of to-day, on the other hand, greater freedom and flexibility should be available. It should be possible, for example, to recognize unusual service more freely and under a greater range of circumstances.

CONFERENCE ON KINDERGARTENS AND ELEMENTARY GRADES

AT a conference recently called by the Commissioner of Education, Dr. John J. Tigert, the following recommendations were made in regard to the organization of kindergartens and elementary grades:

Problems connected with kindergarten-elementary grades in the public schools are exercising the attention of schoolmen.

In a response to a call by the commissioner of education, general supervisors from 20 cities, located in all parts of the country, recently met in conference in Boston, Mass., to discuss questions relating to such grades. The grade units represented by those attending the meeting included kindergartens, combined kindergarten-primary grades, the six elementary grades, and combined kindergarten-elementary grades.

Discussion centered on criteria for judging the values of supervisors' programs of work. These criteria covered many details under the headings of adequate duration of programs, techniques of supervising teaching, administrative duties and the relationships of supervisors to other staff and line officers in the superintendent's school organization.

The consensus of opinion at the conference favored the combined kindergarten and six elementary grades as the most desirable supervisory unit. This unit provides the opportunity for a closely intergraded program of educative activities for children through all the grades of the elementary school.

Foundations of social and intellectual habits and of emotional controls, established in the kindergarten, must be built upon in the elementary grades. Subjects of the elementary school curriculum have their beginnings in the kindergarten and first-grade activities.

An adequate program of supervisory work cares for this unit of grade experiences, and protects the children from periodic changes in methods of teaching and in classroom procedures as they are promoted from grade to grade or transferred from one building to another within the school system of a city.

They will offer examples of outstanding plans for improving educational opportunities for the children through meeting problems of teaching methods or of classroom administration with the classroom teacher and the elementary school principal.

ADULT EDUCATION IN MICHIGAN

A STUDY of adult education in Barry and Jackson Counties, Michigan, is being made by local committees cooperating with the Michigan State College, the American Association for Adult Education, the American Library Association and the Carnegie Corporation, which has made a grant toward the expense of the study and the resulting experiments. The immediate and local aim of the study is a better adjustment between needs, desires and resources, so that opportunity for adult study will be open to many more people in the two counties. The further and wider intent is to classify and test the merits of different forms or types of adult education and to develop techniques which will be useful to other counties in making and carrying out adult education programs.

Barry County has been selected as typical of hundreds of agricultural counties in the United States. It has 3,000 farms and a total population of 22,000. The county seat, Hastings, has a population of 6,000. The relationship between county seat and farm population is one of friendliness and understanding. Jackson County is typical of hundreds of agricultural-industrial counties. The total population is about 85,000, of whom over 15,000 are on the 3,500 farms of the county. The city of Jackson, which is the county seat, has a population of 65,000. The problems of adult education and of community relationships are much more complex than those in the predominantly agricultural county.

A simple and elastic organization has been developed for study and experiments. Representatives from county and city organizations which are interested in adult education authorized the appointment of an executive committee, which appoints subcommittees as needed. Self-

studies by public and private agencies are now under way. The public agencies which are already studying the adult education phases of their work are the libraries and the schools. Among the voluntary organizations which are undertaking self-studies are parent-teacher associations, women's clubs and farm bureaus. The county agricultural agent is the focal person in each county. Specialists of state and national agencies have been called on for assistance with various phases of the study, but so far as possible the work is being done by the people of the counties.

While the Michigan State College is responsible for initiating the study, all the educational institutions near the two counties are counseling in the plans, and have expressed desire to cooperate in any continuing education service which results.

Paul J. Rood, the Barry County agricultural agent, has been given temporary leave for service as field specialist. John D. Willard, director of continuing education at the Michigan State College, is acting as director of the entire study.

VOCATIONAL SCHOLARSHIPS OF THE UNIVERSITY OF THE STATE OF NEW YORK

THE New York State Department of Education offers twenty-five scholarships of $1,000 each to men and women with the requisite trade and technical training who desire to enter the teaching profession. Persons who have been awarded these scholarships and who complete satisfactorily the prescribed one-year resident course in industrial teacher-training at the State Normal School, Buffalo, will be given a life license to teach their respective subjects in the public schools of the state. Persons now holding a teacher's license will not be eligible for such scholarships. Salaries paid to vocational teachers in the public schools of the state of New York range in amounts from $1,800 to $3,500 a year.

Men must have had five years or more of journeyman experience in a trade, industrial or technical occupation. Women must have had five years' experience, of which not more than one shall have been as an apprentice, satisfactory completion of the work of the eighth grade and one full year of work in an approved high school or its equivalent.

The following trade and technical groups are eligible: *Men* — Automobile repairing — all branches—architectural drafting, bricklaying, cabinetmaking, carpentry, electrical construction—all branches—jewelry manufacturing, lithography, mechanical drafting, printing and decorating, pattern-making, photoengraving, plumbing, printing (presswork and composition), sheet-metal work, shoe manufacturing, watch repairing, weaving—silk, cotton or worsted. *Women*—Artificial flower making, novelty work, power machine operating—all types. *Men and women*—Clothing manufacturing—designing and cutting, hand sewing.

Persons interested and eligible for a state scholarship should write at once to the Division of Vocational and Extension Education, State Department of Education, Albany, for proper forms upon which to make application for a scholarship. Applications must be on file on or before May 8, 1928.

THE SUPERVISORY SERVICE BUREAU OF THE UNIVERSITY OF WISCONSIN

STUDENTS who take teacher training at the University of Wisconsin will not be forgotten after graduation but will continue their training in service for two years under the plans of the state university divisions of the institute for the training of teachers organized five months ago. The "Wisconsin Plan" is now in active operation.

Twelve school systems in Wisconsin have been visited since fall under the new supervisory service bureau, which is in charge of Professor A. S. Barr and T. L. Torgerson. A correspondence service whereby teachers, principals and superintendents may receive aid in solving school problems by mail and a bulletin service dealing with specific teaching problems are included in the plan.

Questionnaires sent to teachers who graduated from the university last year, to determine difficulties which beginners have, resulted in 150 answers. These are to be tabulated this spring.

No evaluation of teachers is made in the visits to schools which graduates request. The supervisor who makes the visit is a specialist both in

teacher training and in the subject which the teacher teaches. He merely spends the day with the teacher and through consultation or demonstration seeks to offer whatever suggestions fit the case. The supervisors are not inspectors. They are "teacher helpers."

Professional schools of engineering, law, medicine and others have already accepted the fact that training institutions do not turn out fully trained persons, comments Professor A. S. Barr, in general charge of the state university supervisory service bureau. "Establishment of the interneship in medicine is an example. Germany has recognized the need for two proving-up years, of work done in the field under careful supervision, required of each prospective teacher."

"The relations in the follow-up system of the institute are unofficial," comments Professor H. L. Miller. "Only such machinery has been devised as is absolutely necessary to establish working relations. The field includes schools in which new teachers work the first two years. Superintendents, principals, supervisors, directors of training departments in normal schools and colleges, heads of departments in high schools are to become members of the Institute for the Training of Teachers. The prospective teacher becomes a member of the institute in his junior year. His membership continues two years after graduation."

A general committee representing institutions and school-systems in the state makes recommendations for the institute as a whole. Each teacher-training institution has its division which deals with its own graduates.

THE TRAINING SCHOOLS OF NEW YORK CITY

ACTION to limit the number of prospective teachers and at the same time to find employment for the thousands now seeking positions is being planned by officials of the New York City Board of Education. A committee of four members of the board is considering the proposal of Superintendent of Schools William J. O'Shea that the number of students admitted to the training schools for teachers be limited for the next two years and a committee of the board of superintendents is about ready to announce a plan for inducing evening school and recreation center teachers who also hold regular day positions to give up their extra employment so that substitute teachers out of work may take their places.

There was little discussion at a recent board meeting on Dr. O'Shea's proposal, all members apparently agreeing that it was a wise step to take. Dr. O'Shea made the following statement:

> The higher requirements which went into effect on February 1 resulted in denying admission to a large number of applicants who would have been eligible under the requirements previously in force. The number actually admitted, however, was approximately equal to the number admitted during the corresponding term a year ago. The number of students admitted to the training schools should bear a reasonable ratio to the number of teachers needed for our schools. Although the applicants have been informed both in the circulars in reference to the training schools and the applications for admission that a considerable period of time may elapse between the time of graduation from training school and the time of appointment as a teacher, the number of applications has steadily increased.
>
> Therefore, I recommend that the Board of Education approve and support the following recommendations:
>
> (1) That the total number of applicants admitted to the three training schools for teachers shall be restricted as follows: For the term beginning September, 1928, not more than 850 applicants shall be admitted; for the term beginning February, 1929, not more than 550 applicants shall be admitted, and for the term beginning September, 1929, not more than 775 applicants shall be admitted.
>
> (2) The number of applicants admitted to the various training schools for teachers within the totals set forth above shall be in proportion to their registers on March 31 of that year. If the number of students is determined for one and one half years in advance the superintendents in charge of our training schools will be in a position to draw up their budgets on the basis of these figures.
>
> (3) The superintendents in charge of the training schools will institute under my direction an equitable method of selecting qualified candidates.

THE CHANCELLOR OF THE UNIVERSITY OF NEBRASKA

EDGAR ALBERT BURNETT, for more than a quarter of a century associated with the Uni-

versity of Nebraska and long a leader in the agricultural and educational life of Nebraska, was elected chancellor of the University of Nebraska at a meeting of the Board of Regents of that institution March 3. He had been acting chancellor for about a year following the illness and retirement of Dr. Samuel Avery.

Chancellor Burnett was born in Michigan in 1865. He graduated from the Michigan Agricultural College in 1887 and thirty years later received from the same institution the honorary degree of doctor of science. Before and after his graduation he taught in the rural schools of Michigan and in 1889 became an instructor in agriculture in the college from which he was graduated. In 1894 he was manager of extensive farms in Canada, and in 1896 became professor of agriculture in the South Dakota State College. He came to the University of Nebraska from South Dakota in 1899, first as professor of animal husbandry. In 1901 he was made associate dean of the Industrial College and director of the experiment station. In the reorganization of colleges in 1909, he became dean of the College of Agriculture.

Under his administration the old university farm grew from a mere farm with a few inferior buildings to an impressive college of agriculture with some ten main buildings. Coincident with the rise in scientific agriculture the comprehensive system of experiment stations throughout the state was developed. Chancellor Burnett was president of the Association of Land Grant Colleges in 1926 and is a director of the Federal Land Bank of Omaha, Neb.

In a statement of policies issued following his appointment, Chancellor Burnett announced the university's intention of decreasing the size of university classes, of developing more favorable contacts between the university and its students, examining and classifying students graduating from the lower quarter in their high-school classes, of developing special advisers for students who find themselves unable to adjust themselves to university work, of developing some system of retirement pensions for the faculty, of giving the graduate college more adequate support, and of erecting several needed buildings.

During the past year Morrill Hall has been erected on the University of Nebraska campus, housing both art and geological museums, the school of fine arts and the department of geology. Andrews Hall is now in process of erection. It will house the college of dentistry and the departments of English and German.

EDUCATIONAL NOTES AND NEWS

DR. WILLIAM FAIRFIELD WARREN, president emeritus of Boston University, celebrated his ninety-fifth birthday on March 13. Dr. Warren was president of the university from 1873 to 1903.

A DINNER in honor of Dr. Harvey N. Davis, the newly elected president of Stevens Institute at Hoboken, N. J., was given last week in the Hotel Astor by nine hundred members of the faculty, alumni and trustees.

DR. HARRY BATEMAN, professor of mathematical physics in the California Institute of Technology, is among the fifteen scientific men nominated by the council for election as fellows of the Royal Society.

DR. B. R. BUCKINGHAM, professor of education and director of educational research at the Ohio State University, has accepted a position with Messrs. Ginn and Company. He will also teach two courses in elementary education in the Harvard University School of Education.

THE REVEREND DR. WALTER B. GREENWAY, pastor of Bethany Temple Presbyterian Church, Philadelphia, has been invited to become president of Beaver College, a non-sectarian school for women in Jenkintown, Pennsylvania.

CHARLES A. LEE, state superintendent of public instruction of Missouri, has announced his candidacy for the Democratic nomination for governor of the state. Mr. Lee was elected state superintendent in 1922, and previous to that had served as superintendent of schools at Butler.

THE Harmon awards, for outstanding contributions in 1927 toward improving relations between white people and Negroes, were presented at the First Congregational Church at Washington by the Commission on Race Relations of the Federal Council of Churches on

March 18. The recipients were Dr. James H. Dillard, president of the Jeanes Foundation and of the John F. Slater Fund, who received a gold medal and $500, and Mr. Julius Rosenwald, of Chicago, chairman of the board of directors of Sears-Roebuck and Company, who received a special gold medal.

BROWN UNIVERSITY will confer the doctorate of laws upon Ambassador Dwight W. Morrow at commencement, according to a dispatch in the New York *World*. The announcement comes from Mexico City, saying that the ambassador will make the trip to Providence to receive the honor.

DR. WILLIAM CALDWELL, MacDonald professor of moral philosophy at McGill University, Montreal, who recently returned to Canada after a lecturing tour in Poland, has been appointed a Commander of the Order of Polonia Restituta.

PROFESSOR J. L. HILLS, dean of the University of Vermont, began on March 14 his forty-first year's connection with the university.

PROFESSOR CARTER ALEXANDER has been elected national vice-president of the Phi Delta Kappa, the professional educational fraternity for men.

DR. MARY HOLMES STEVENS HAYES, director of Vocational Service for Juniors, New York, was elected president of the National Vocational Guidance Association at its recent conference in Boston.

S. M. ANDREWS, of Walsenburg, has been elected president of the Colorado Education Association. He succeeds Superintendent C. E. Brown, of Greeley.

MISS AGNES HUSBAND, dean of women at the University of Kansas and this year a student at Teachers College, has been appointed chairman of the Press and Publications Committee of the National Association of Deans of Women.

PROFESSOR DEXTER PERKINS, of the University of Rochester, has been named secretary of the American Historical Association, succeeding the late Professor John S. Bassett.

THE Wesleyan University Board of trustees announces the election of Arthur E. Young, '98, of Pittsburgh and Frederic Kniffen, '95, of Wilmington, Del., to the board to fill vacancies created by the deaths of William V. Kelley, '65, and Augustus B. Carrington, '76.

THE REVEREND GEORGE THOMAS SMART, D.D., formerly president of Wheaton College, died on March 13, in Noroton, Conn., in his sixty-fifth year.

THE death is announced of James Parker Hall, for twenty-four years dean of the University of Chicago Law School.

ARTHUR JEROME BOYNTON, professor of economics at the University of Kansas, died on March 18, at the age of fifty-seven years.

IT is reported in the daily press that I. I. Cammack, for the last fifteen years superintendent of public schools in Kansas City may resign to enable him to act in an advisory capacity to the school system.

ACCORDING to *The School Board Journal* court proceedings have been begun against Mr. K. P. Banks, county superintendent of schools of Carter County, Tenn. The charges include improper withdrawing of money, paying teachers under assumed names, paying the attorney fees for certain board members, and making improper records in the minutes.

The School Board Journal also states that Mr. W. T. Logan has been reinstated as superintendent of schools at Cromwell, Okla., by an order of the Wewoke District Court. Mr. Logan was suspended by the county superintendent and the school board, but he refused to relinquish his position.

SUPERINTENDENT HAROLD STEELE, of Saginaw, Mich., has refused to be a candidate for reelection. His appointment expires at the end of the school year in June.

MISS MATTIE W. HUSTON, who has been working at Teachers College, Columbia University, has been appointed director of extra-curricular activities in the high school at Tarrytown, N. Y.

MISS HELEN JAMES and Miss Helen Serepta

Bowman, both of whom have had work in the educational guidance of women and girls at Teachers College, Columbia University, have accepted appointments to the faculty of the new Sarah Lawrence Junior College, which is to be established at Bronxville, N. Y. Miss James is to be director of health, and Miss Bowman an assistant to the administrative head of the college and instructor of history.

SEVERAL changes in superintendencies in New York State for the coming year have been reported. At Nyack, Homer J. Wightman has resigned. He will be succeeded next fall by Alfred C. Hamilton, superintendent of schools at Seneca Falls since 1920. Mr. Hamilton has been principal of schools at Kinderhook, West Winfield, Livingston Manor and Ithaca and he was a member of the faculty of the State Normal School at Cortland. At LeRoy, Earl B. Taylor has tendered his resignation to accept the position of professor of education at the University of Rochester. Superintendent Taylor is completing his eleventh year at the head of the LeRoy school system. Mr. Taylor will be succeeded by Edward W. Spry, who has been superintendent of schools at Owego since January, 1927.

ROY P. WISEHART, state superintendent of Indiana, has named a committee of Indiana county superintendents to aid in the selection of texts to be used in extension classes held next year in connection with monthly teachers' institutes. The committee will be called to Indianapolis for a conference in regard to this work. The members of the committee are: K. W. Hemmer, Evansville; I. M. Kenworthy, Martinsville; Glen V. Scott, New Albany; J. R. Crawley, Greensburg; Geo. W. Reitzel, Danville; Grover Van Duyn, Greenfield; Lee Swails, Indianapolis; R. E. Warren, Winchester; Merle F. Coons, Crawfordsville; M. F. O'Rear, Fowler; J. A. Kemp, Winamac; Clarence Green, Auburn, and W. L. Adams, Goshen.

PETER FERRARI, inspector of primary schools, Canelones, Uruguay, recently spent some time in the department in Washington studying the methods used there by the department and by the state agricultural colleges in the cooperative extension work. Before returning to Uruguay he expects to visit various states, to study methods of education and of supervision in schools.

DEAN THOMAS W. GRAHAM, of Oberlin College, is spending the second semester abroad. The first half of his time will be spent in speaking at conferences and institutes. He first goes to Genoa, Reval, Rega, Warsaw, Krakow and Prague. He is a delegate from the Student Division of the National Council of the Y. M. C. A. to the International Missionary Council that is to hold its sessions on the Mount of Olives during Easter week. During the summer he will travel through the central European countries.

DR. WALTER GOODNOW EVERETT, professor of philosophy at Brown University, has been appointed by the University Board of Regents professor in the experimental college of the University of Wisconsin for two months beginning April 10.

PROFESSOR THOMAS F. TOUT, of the University of Manchester, is giving at Cornell University a series of twelve lectures on Medieval England.

THE Institute of International Education announces that Professor Wilhelm Dibelius, head of the English department of the University of Berlin, will arrive in New York on March 24. He expects to visit Canada during April and May and will visit the colleges in the vicinity of Chicago, Philadelphia and Washington during June. During the month of July he will be in the east in the neighborhood of Boston and New York. The subjects of Dr. Dibelius's lectures are: Is Dickens still a Living Author?; The Poet as the Mouthpiece of his Environment; Post-war Germany from the Viewpoint of an Educator; Rationalism and Romanticism in English Culture.

AT a meeting on March 26 of the Phi Beta Kappa Alumni of New York, President William Herbert Perry Faunce, of Brown University, will address the association upon the subject "Scholarship, True and False."

DR. ROSCOE POUND, dean of the Harvard Law School, will be the commencement speaker at Lehigh University on June 12.

DR. HAMILTON HOLT, president of Rollins

College, will be the commencement speaker at Boston University.

DR. WILLIAM LOWE BRYAN, president of Indiana University; Professor N. E. Richardson, of Northwestern University, and Professor G. L. Brandenburg, head of the department of psychology, Purdue University, will be among the speakers at a Conference on Character Education to be held at De Pauw University on April 26, 27 and 28.

VISITING lecturers at the summer school of English at Middlebury College include: Dorothy Canfield Fisher, novelist; Robert Frost, poet; Professor John Livingstone Lowes and Professor Charles Swain Thomas, of Harvard University; Professor N. Roy Ridley, of the University of Oxford; Professor Allan Nevins, of Cornell University, and Isabel M. Paterson, author.

DR. I. N. MADSEN, director of the department of tests and measurements of the Lewiston State Normal School, will give courses in school administration, mental measurements and problems in elementary education at the University of Montana during the summer session of 1928.

INTERNATIONAL finance and foreign investments will be the subjects of the fifth Institute of the Norman Wait Harris Memorial Foundation at the University of Chicago to be held June 18 to 30. Leading authorities from foreign countries and the United States will present all phases of the political and economic aspects of the question. Among the men already engaged to speak at the institute are Professor Gustav Cassel, of the University of Stockholm; Professor Corrado Gini, of the University of Rome; Professor T. E. Gregory, of the University of London; Dr. Robert R. Kuczynski, of the Institute of Economics, Washington, D. C., and Mr. Henry Kittridge Norton, of New York. Representatives of several of the departments of the federal government will be present, and a large attendance of bankers, economists and business men is expected. Round tables will be organized to afford opportunity for detailed discussion of the problems within the field of the institute's program. Public lectures will be given every day during the period of the institute. The first institute was held in 1924, being devoted to the problems of European reconstruction. The second, in 1925, was concerned with problems in the Far East; the third with relations between the United States and Mexico, and that of last year with the problems of the British Empire. Professor Quincy Wright, executive secretary of the Harris Foundation, is in charge of the program.

COURSES for administrative officers of institutions of higher learning will be offered during the summer quarter by the University of Chicago. President Frank N. McVey, of the University of Kentucky, will give during the first term courses in university administration and in instructional problems in colleges and universities. During the second term President J. S. Brown, of the Northern Illinois State Teachers College, will give courses in the organization and administration of normal schools. Professor Floyd W. Reeves, of the University of Kentucky, will give during both terms courses in the financial administration of higher institutions and in problems of deans, registrars and other administrative officers and faculty committees. During the week of July 16 the courses will be supplemented by the Third Annual Institute on Higher Education to which administrative officers in colleges, universities and teacher-training institutions are invited. In addition to the regular faculty of about two hundred who will give instruction, fifty of full professorial rank from other institutions will give courses. They include Eric Temple Bell, mathematics, California Institute of Technology; Carroll Gideon Bull, immunology, School of Hygiene and Public Health, Johns Hopkins University; Paul Franklin Clark, bacteriology, University of Wisconsin; Harold Milton Ellis, head of the department of English, University of Maine; Henry Rushton Fairclough, classics, and Benjamin Oliver Foster, classical literature, Stanford University; George Depue Hadzits, Latin, University of Pennsylvania; Charles Carroll Marden, Spanish, Princeton University, and Raymond Moley, political science, Columbia University. Other instructors of full professorial rank will include William Albert Noyes, chemistry, University of Illinois; DeWitt Henry Parker, philosophy, University of Michigan; Ernest Findlay Scott, New Testament criticism,

Union Theological Seminary, New York; William Bernard Sharp, bacteriology and preventive medicine, University of Texas; William Sentman Taylor, psychology, Smith College, and Clarence Ward, head of the department of fine arts, Oberlin College.

THE next annual meeting of the Association of American Colleges and the Council of Church Boards of Education and allied interests is to be held at Chattanooga, the entire week of January 7 to 12, 1929. "The College Teacher" has been chosen as the general theme for all the associations meetings at that time.

TWO million dollars has been raised for the endowment fund of the six American colleges in the Near East since the national campaign for funds opened in New York City, December 2. The total endowment at present is about $9,000,000, but the Near East College Association would like to have $15,000,000 in all to start the colleges on a permanently self-supporting basis. The colleges are the American University of Beirut, Robert College, Constantinople Woman's College, International College of Smyrna, Sofia American Schools and the Athens College in Greece.

THE Casa Italiana, of Columbia University, during the past few weeks has received almost thirty messages from various Italian institutions of learning urging that American students going abroad visit Italy to study. The messages will be placed on exhibition in a few days. A letter from the new university for foreigners established by Mussolini at Perugia reads as follows: "To Italians living in the United States: In the name of the great Italian navigator, who gave the world a new continent, this Royal University sends warmest greetings in the hope that they, in their hospitable and noble country, will maintain the tradition of the fatherland by promoting better understanding and amity between the two young and vigorous nations." The letters were sent to the Casa Italiana at the suggestion of Emilio Bodrero, under-secretary of state, at the Italian Ministry of Education, and with the approval of the Italian government. Special privileges for foreign students in Italy have been arranged in the form of reduced railway rates and other similar measures.

DISCUSSION

THE BUREAU OF RESEARCH UNDER THE SCHOOL SUPERINTENDENT

Is the principle sound that research into the bases and conditions of a given social function should be conducted by the institution charged with that function? In the field of public school administration the principle is assumed. Bureaus of educational research responsible to the city superintendent of schools do exist and "have proved their usefulness." On the basis of experience a superintendent is able to advise others as to what he "expects" of "his" bureau, so that they may be guided in setting up similar bureaus. State boards of education look confidently to establishing such bureaus.

To raise the question is to confess a doubt. The doubt, however, is not as to the desirability of exact data for the guidance of administrative organization and process. It is, rather, as to the significance of such allocation of the research function for realization of the democratic ideal in education.

It is the judgment of historians and sociologists—not a scientific finding demonstrable by coefficients of statistical correlation and mathematical calculation of probable error—that the fate of institutional membership is to become "institutionalized." Members, because they are human, become by habit committed to the welfare of the institution in which they serve. That institution, in the degree that it is efficient for a fixed end, tends to become a mechanism of smoothly integrated parts working upon the firm base of established policy. To the loyal member, then, the machine becomes relatively an end in itself. Whatever suggestions may add to the power and smoothness of its operation he welcomes; whatever suggestions may threaten the central mechanism, or particularly, the base upon which it stands, he resists with all his—not always puny—might. There is no evidence, statistical or otherwise, that the membership of offices of public school administration is exempt from this fate.

If this is so, is there no likelihood that under such an allocation of the research function "lines of inquiry" will be designed to ends of lubrication and valve grinding, or of "sympathetic" rationalization of established bases for the administrative machinery? In either event the life of the existent mechanism is prolonged

—the "essentials" of existent administrative structure confirmed.

All that is good, so long as the end of administrative functioning remains unchanged. But in an evolving democracy the end does not remain unchanged. Moreover, in theory at least, democratic education is designed not only to meet changes in the times as they may arise, but to take a part in changing the times. Thus administrative mechanism can not, even in base, desirably become fixed. Any device, then, that may involve accentuating of stability in organization may, by the same token, become an obstacle to progress, and to that extent evil.

Now we do have universities, we have "foundations," we have "councils" and "associations" for research, which, whatever their exclusiveness, do include men and resources competent to impartial investigation of the problems of administration in the public school system. Their members, to be sure, are "institutionalized," but not with respect to the field of research in question. Consequently discouragement of particular lines of inquiry or suppression of unwelcome findings is less a human probability if the function be placed in their hands. Perhaps, too, public opinion, based on impartial evidence, may bring desirable changes in administrative bases and mechanism such as would not be effected by a bureau of research directed by and reporting to the superintendent of schools—no matter how able and honest the individuals concerned may be.

THEODORE H. EATON
CORNELL UNIVERSITY

A CITY GOES TO SCHOOL

WHEN we recall the apparent enmity which existed between parents and teachers forty or fifty years ago, not so long ago in some communities, with the present conditions in Evansville, Indiana, we can not but feel elated at the change that has occurred.

During the first ten weeks of the present school year each elementary building has had 100 per cent. visitation by parents. It is evident that the parents in this city of 125,000 people better understand a little of modern school methods and that they know and appreciate teachers who are so very important in the lives of their children.

Superintendent John O. Chewning, the principals and the teachers deserve highest praise for this achievement. While the parents have actually made serious effort to visit the school, the teachers have sent out the welcome and in cases of definite inability of parents to visit school, the teacher has visited the home.

The following extract from the *Public School Bulletin* is a fine expression of an elementary principal's attitude:

> What a change! What a change! If memory serves correctly, time was when teachers and parents were unacquainted and often suspicious of each other. Figuratively speaking, the schools were locked against the parent. Often, however, a belligerent patron would "Crash the gate" and bring confusion and turmoil to the school. Once in a great while, too, some great soul would find the gates ajar and would steal into the building and into the teachers' hearts almost unaware.

The change is attributed to a different attitude on the part of the teacher, friendly feelings brought about by the Parent-Teacher clubs, and a younger generation of parents who are determined to keep up pleasant relationships because their own school experiences were agreeable.

HOMER L. HUMKE

QUOTATIONS

A TRIUMPH OF LEXICOGRAPHY

IT is good to hear that the one remaining section of the Oxford English Dictionary is at last out of the editor's hands and in those of the printer and binder, and that it will be issued to the public on April 19. Such is the announcement which the *Periodical*, the organ of the Oxford University Press, makes in its current number; and in another column we give further particulars about the dictionary from that source. In broad outline at least the history of the great undertaking must be familiar to those who, as it has grown volume by volume, part by part, have come more and more to consult it, rely on it and admire it. But now that it is complete from A to Z, though a supplementary volume for new words will follow, it can be acclaimed, as a whole, as an unparalleled work of collaboration which from inception to finish has occupied many of the first scholars in England for seventy years, has been in the process of

coming out for forty-four years, and has cost the Press which has produced it some £300,000. One external subsidy it has received, a grant of £5,000 from the Goldsmiths' Company. It is the fashion now to call it the Oxford English Dictionary, though officially it is the "New English Dictionary," often called for short the "N. E. D." As time went on, however, the claims of Oxford to a share in its popular name became more and more difficult to resist, and justly in view of developments. It is true that the Philological Society first planned it, and that neither Murray, without whom it might never have taken real shape, nor Bradley, his brilliant successor, was an Oxford man. In a sense it is pleasant to think that they were not, for their careers are all the more inspiring for the early difficulties which each had to overcome; but if ever strangers were welcome at Oxford, they were—Murray fresh from his Mill Hill scriptorium, with his strong frame and magnificent head which proclaimed him by nature to be a scholar of heroic mould, and Bradley, who was introduced to the dictionary a little later, the simplest, most learned and most natural of men. Both these great editors lived to a ripe age, and each, certainly Murray, had hopes, if not visions, of outliving his task; but the present editor, Mr. Onions, who has just passed the last proof, is the fourth. Of the hundreds of collaborators few survive who helped to collect slips when the printing began; fewer still from that earlier and obscurer period when all that could be done was slip-collecting. It is curious to reflect that one who was possibly the oldest contributor of all—Harriet Martineau—was born in 1802. But merely to read the acknowledgments to helpers as they have appeared in successive instalments is to realize that for two or even three generations the fine flower of learning has gone down before the harvest could be gathered in.

What the harvest is has been set forth in a manner by statistics—the 414,825 words, the 500,000 definitions, the 1,827,306 illustrative quotations and the like, and these statistics can be compared with those of other dictionaries. Yet nothing but familiarity with the volumes can really explain the greatness and the excellence of the dictionary. Next to buying it—and it is admittedly expensive, and the pleasure of receiving a section for a small sum periodically is now a thing of the past—the best thing for every one who values the English language is to ensure that by some means or another, in library, club or place of business, he shall always be in a position to have access to it. The *Periodical* gives evidence to show that even at this stage it is not so well known as it ought to be, but no one who has ever lived near it would willingly put himself out of range, and, though it has already become the basis of minor dictionaries, the children can be no substitute for the parent; indeed, in comparison they are almost spurious. Nowhere else is the continuity of the language so clearly illustrated as when meanings and quotations are attached to a word from the time of William the Conqueror or even earlier to the present day. It is sometimes said that the dictionary is too hospitable, and that it does not distinguish enough between good and bad currency, contenting itself, except in flagrant instances, merely with a dated citation and the writer's name. This, however, is to forget that its principles are fundamentally historical, and that the history of language is full of examples of words which after graceless introductions have risen in dignity, while it is not always safe to write "obsolete" or "dialect" or "slang" against a word. Dictionaries that pick and choose do so at the peril of their universality. The Oxford Dictionary seems to have been shaped by forces which the founders did not at first foresee, but to which in loyalty to their trust they saw that they had to submit. Hence for years a recession of hopes for a conclusion within measurable time and the necessity now for a supplement. It is, however, an enormous triumph to have arrived at a finish, for several other national dictionaries, begun even earlier, are not yet within sight of the end, and the effect of completion, it is to be hoped, will be an ever-growing appreciation by the English-speaking world of its linguistic inheritance.—*The London Times.*

REPORTS

THE GROUPING OF NEW YORK CITY PUPILS ACCORDING TO ABILITY

GROUPING of pupils according to ability into classes for bright, slow and normal pupils has been inaugurated in the public schools of New

York City. In a general circular to the schools Superintendent of Schools William J. O'Shea outlines the procedure for grouping children. According to a summary given in the *Bulletin* of the University of the State of New York wherever pupils are classed according to ability the greatest number will be, as a rule in the normal group. In a 6A grade of 200 pupils, for instance, the probability is that there will be one class of bright pupils, one of slow pupils and three of normal pupils and allowance must be made for growth in the number of normal classes. He suggests that if there be one class in a grade the grouping into bright, slow and normal should take place within that class. If there are about 80 pupils in a grade there will not be a sufficient number to form a bright class and a normal class. He suggests that the bright pupils and the best of the normal pupils be grouped in normal classes and the other normal pupils and slow pupils be placed in the second class. It must be remembered, he states, that this grouping of pupils necessitates a modification of the syllabus which, however, should not mean the omission of whole subjects.

Dr. O'Shea then gives reasons for this method of grouping, as follows:

One of the objects of a classification by the use of standardized methods of measuring is to enable the teacher to keep each pupil at his highest level of achievement and within the range of the learner's capacity. That can best be accomplished in a fairly homogeneous group. It is not fair to the bright pupil to hold him back to accommodate the normal or the slow, and it is ethically wrong to expect the slow to keep pace with the bright, or even normal. The slow should not be driven to despair or to indifference by asking more of them than they are capable of doing. The bright should not be driven into day-dreaming or idleness by waiting for the slow.

It is sometimes said that in a classification according to capacity and rate of learning the pupils in a slow class miss the inspiration of witnessing the work of the bright and quick learners. Fortunately, there are, even in a slow class, pupils of varying abilities, that is, some a little brighter than others. It should not be overlooked that the pupil who is naturally slow and who is placed in a bright class may become discouraged by seeing others keeping far ahead of him. He will be spurred on by the teacher to greater and greater efforts, which finally would be beyond him. Such an organization is not an ethical one because the demands are beyond the capacity of the learner.

Pupils in the slow classes are not inferior, as a rule; they are different. Some of them may be very successful in life later on. No odious comparison should be made. Slowness is not always a disadvantage. A person who is slow of comprehension may remember longer what he has, at last, comprehended. The teacher of a slow class, in covering less ground, should not have more difficult work than a teacher of a normal group covering more work. If the required work in the syllabus is adapted to the learner's capacity, teaching is not more difficult in a class of slow children than in any other. Mistakes in grouping are sometimes made. As soon as a teacher discovers a maladjustment it should be corrected by a transfer to a class more suited to the pupil's capacity. No parent will object to the placing of a child in a class in which it can be most benefited.

All children finishing the eighth year satisfactorily, bright, normal or slow, should receive diplomas, as they have covered the prescribed course of study although they may not have covered the whole of the syllabus.

A class is a body of pupils in a school pursuing the same or equivalent studies; it is a community jointly partaking of about the same experiences. If there are more pupils in a class than can properly be taught we classify them, which means we divide them into classes, that is, we arrange them in sets according to some method founded on common properties or characters: thus, there may be 200 pupils in the 6A grade who must be distributed into classes founded on common properties or characters. Classification is the act of forming a class or of dividing into classes.

A group is a number of individual things or persons related in some definite way and segregated from others: thus, a bright group.

Formerly, there was no plan of classifying except a numerical one, that is, 160 pupils were simply divided into four classes of 40 each and an attempt was made to treat them all alike.

THE EYESIGHT OF INFANTS AND PRE-SCHOOL CHILDREN

OF 2,044 pre-school children undergoing eye tests in Gary, Ind., one third, or exactly 36.1 per cent., were found by federal investigators to suffer from faulty vision.

These results, made public by the Eyesight Conservation Council of America, are set forth in a report on the Gary experiments made to

the Secretary of Labor, James J. Davis, a member of the Council's Board of Councillors.

Complete physical examinations were made of 994 infants under two years of age and of 3,125 children whose ages ranged from two to seven years. In both groups the distribution of sex was fairly even.

The work was carried on in connection with a social and economic study of infant mortality and the pre-school child in Gary by the U. S. Children's Bureau. The study included all children under seven years of age attending the kindergartens and primary grades in all the public schools as well as in three parochial schools.

The Gary Children's Year Committee of the Council of National Defense cooperated with the government representatives under the direction of Dr. Anna E. Rude, director of the child hygiene division of the Children's Bureau, who reported on the results to Secretary Davis.

The Eyesight Conservation Council, in analyzing the facts obtained by Secretary Davis, emphasizes the fact that "the time to begin to preserve eyesight is at birth," pointing out that rattles and other toys are common sources of infant eye strain. The report continues as follows:

> It was possible to test vision in only about two thirds of the cases of the children who were given physical examinations, since only the exceptional child under three years of age comprehended the test at all, even though it was made as simple as possible compatible with accuracy, and only a very small number of children under four years did so.
>
> Out of the 2,044 children given vision tests, slightly more than one third, or 36.1 per cent. showed defective sight of varying degrees, with apparently no significant relation to age, although those in their fifth year showed a slightly higher per cent. than the others.
>
> In 108 cases, or 5.3 per cent. of the whole number given tests, vision was seriously defective in both eyes, and the need for glasses was imperative, although only ten per cent. of these children so urgently in need of glasses were wearing them. The other 90 per cent. were not even cognizant of the necessity.
>
> There was a high proportion of cross-eyed children, actually 2.4 per cent. of all the children, but here again corrective glasses were being worn by only about one seventh of those with this defect. Only one boy, out of the total of 33 boys with cross-eyes, was wearing glasses.
>
> Obviously, it was impossible to obtain data regarding vision in the group of 994 infants under two years of age by use of the methods employed; but twenty-three infants, or 2.3 per cent., plainly showed eye defects, and the proportion steadily increased with age.
>
> While the report of the Children's Bureau is entirely an analysis of statistical data with no attempt to analyze the causes and effects of defects, it is quite evident from the high prevalence of defective vision that the eyesight of infants and young children calls for greater attention than has been given in the past.

EDUCATIONAL RESEARCH AND STATISTICS

REPEATED THORNDIKE INTELLIGENCE EXAMINATIONS

RELATIVELY little evidence has been published as to the significance of scores on repetitions of the Thorndike Intelligence Examination for high-school graduates. In describing the 1919–1924 series of this test Wood[1] reports a reliability coefficient of .85. Ruch[2] estimates the reliability of Part I of 1925–30 series as "at least .85 and probably .90 or slightly higher." Both of these quotations are based on the assumption of immediate repetition of similar forms of the test. Eells[3] summarizes miscellaneous repeated tests at Stanford University. He states, "Among the approximate 7,000 students who have taken the Thorndike test at Stanford there are a small number, less than 1 per cent., who have taken the test a second time at intervals ranging from one week to 3½ years between the two trials. They are mostly 'freak' or abnormal cases and little confidence can be placed in conclusions drawn from such a small and unrepresentative sample. . . . When those whose original score was 50 or higher are separated into two groups, those re-

[1] Wood, Ben D. "Measurement in Higher Education." World Book Company, Yonkers. 1925.

[2] Ruch, G. M. "A Mental Educational Survey of 1,550 Iowa Seniors." University of Iowa, *Studies in Education*, Volume II, Number 5, p. 19.

[3] Eells, Walter C. "Upper Division Scholarship," Part II, Faculty Bulletin No. 8, Stanford University, May 21, 1927.

tested after an interval of less than one year, and those tested after an interval of one year or more, the following results appear:

Interval	Number of cases	Mean increase of scores
Less than one year	29	9.4
One year or more	6	11.0

No statement is made as to the correlation between the scores of the first and second tests.

To obtain data as to the correlation between successive tests after varying intervals and as to the effects on test score levels of repeated examinations, the Thorndike test[4] was given to 207 members of the class in Beginning Psychology at Stanford University three weeks after the opening of the autumn quarter. These students were instructed to take the examination as an integral part of the work of the course. The members of the group varied in classification; 188 had originally taken other forms of the same test as candidates for admission to the university at intervals of from one to four years. Nineteen had taken the same form of the test within a year.

Table I lists the correlations between the original test scores and those obtained in this experiment. For the groups segregated according to the length of interval between tests a reduction in closeness of relationship occurs with each increase of the interval of time. The retests within a year using the same form of the test are noted as correlating relatively closely with the original test scores. The small number of cases, involving a relatively large probable error, raises a question as to whether .889 may be accepted as a representative coefficient of reliability. More likely it represents a figure above which the reliability does not fall. On the other hand, the successive reductions in correlation with increase of time interval suggest that the coefficient after one year (.751) and the equivalent figure (.752) obtained when all groups are combined regardless of interval are lower than the true reliability. The writer would hazard a guess that with a more adequate representation and the use of an alternative form after an interval of less than a year between tests the coefficient of reliability for the 1925–30 series of the Thorndike examination would be between .80 and .85 or approximately the same as for the 1919–24 series as reported by Wood.

TABLE I

CORRELATIONS BETWEEN ORIGINAL AND RETEST SCORES

	r	N
Same test within one year	.889	19
New form after one year	.751	104
New form after two years	.720	59
New form after three years	.648	25
Total group—Mixed intervals	.752	207

[4] This study was made possible through the cooperation of Professors W. R. Miles and P. R. Farnsworth, of the Stanford Department of Psychology, who arranged for subjects from their classes, and of Dr. E. L. Thorndike through advice and a financial subsidy.

That Ruch's estimate of the reliability of Part I is higher than warranted by experimental data is suggested by the figures of Table II, which for the entire mixed group of 207 students shows the correlations between repeated parts of the test. Making a similar allowance for the time intervals involved an estimate of the reliability of Part I might perhaps be placed as high as .75.

TABLE II

RETEST CORRELATIONS FOR PARTS OF TEST

(Total group)

Part I	.626
Part II	.531
Part III	.587
Parts I and III	.713
Total test	.752

Of interest in connection with another study of the feasibility of omitting Part II in order to save testing and scoring time is the fact that the sums of scores in Parts I and III give a retest correlation only slightly lower than that for the entire test (.713 as compared with .752).

The effect of retests on scores is given in Table III. Although the average score was raised for each group except that with the two-year interval the differences are not highly significant. The largest absolute difference of 2.16

TABLE III

EFFECT OF RETEST ON AVERAGE SCORES

	Within 1 year	After 1 year	After 2 years	After 3 years	Total group
N	19	104	59	25	207
First Mean score	80.5	79.54	79.74	70.20	78.80
Second Mean score	81.3	81.22	79.34	72.36	80.15
Difference	0.8	1.68	−.40	2.16	1.35
Difference/st. dev. of diff.	.514	2.26	.365	1.46	2.38
First standard deviation	14.15	11.1	11.60	9.06	12.25
Second standard deviation	12.82	10.2	10.88	8.58	11.65

points at the three-year interval is only 1.46 times its standard error. The difference in means for the entire mixed group is of slightly more significance (2.38 times standard error) but still falls short of the usual criterion of three times the standard error. The absolute amount of increase was 1.35 points.

The effect on dispersion of the retesting was to produce a consistent though small reduction in the standard deviation of scores. This also is reported in Table III.

The conditions surrounding the original test and the repetitions, perhaps, should be further emphasized and discussed. The first test for each student was taken under competitive conditions with admission to the university at stake. Each was an applicant for one of a limited number of vacancies for admission. Strong incentive was present to do well on the test and earn a score that would help in obtaining favorable action on the application for admission to Stanford.

On the other hand, the second test was taken as a required exercise in a university course. Relative standing in test score was of small personal significance as compared with that in the first situation. Degree of effort depended to a greater extent upon individual spirit of cooperation and conscientiousness. The lack of a larger increase in average scores came as a surprise to the writer. Practice effects on scores of those with the most recent original tests and experience or maturity effects for others fail to be demonstrated clearly. Another set of retests with conditions of incentive more carefully controlled and equated is needed to establish the normal expectation of change, or its lack, under retest conditions.

The reduction in correlation between first and second test with the passing of time may be due to the above-mentioned difference in attitude and incentive, or possibly to more specific informational causes, such as differences in curriculum for the members of the group studying in different fields of knowledge, some more closely related to material in the tests than others. The difference in standard deviation of scores for the groups at different time intervals accounts to some extent for variations in the correlation coefficients, but the reductions in correlation are not entirely consistent with the changes in standard deviation. Other causes would appear to be more potent.

Summary

For retests with the Thorndike examinations the correlations between first and second test scores are found to be successively reduced with increases in the interval of time between tests. The variation is from .648 after three-year interval to .889 for interval of less than one year but on repetition of the same form.

The reliability coefficient from immediate repetition of a different form of the test is estimated as probably .80 to .85. The reliability for Part I is estimated as possibly .75.

Changes in average scores vary from a decrease of .4 to an increase of 2.16 points. The significance of these changes is doubtful, the largest difference being 2.38 times its standard error.

The dispersions of scores are somewhat more restricted on the second test than on the first test.

Factors such as change in attitude and varied intervening educational experience raise questions as to the full significance of the data presented.

K. M. COWDERY

STANFORD UNIVERSITY

SOME RESULTS OF SOCIAL INTELLIGENCE TESTS

IT has been suggested that there are different kinds of intelligence, such as abstract, concrete

and social. Such a suggestion is a very useful one, because it directs our attention to the different kinds of stimuli which may be used for intelligence test purposes. The dominance of the verbal school-text type of intelligence test is bad, because it tends to make us think of intellect as bookish and verbal.

It would seem, however, to be rather difficult to construct tests of social intelligence. It is more difficult to measure their validity. Recently one such test has appeared, namely, the George Washington University Social Intelligence Test prepared by Moss, Hunt, Omwake and Ronning. This test was given to a group of fifty graduate students studying testing and measurement at Teachers College. Here are the results for the T. C. students, compared with the norms given by the authors of the test:

	n	Median	Q_1	Q_3	Q
T. C. students.....	50	113	98	123	12.5
College graduate norms (Moss)	100	113	99	123	12.0

There is a remarkable similarity between our results and the results found by the authors of the test.

What is the test measuring? Is it the same type of thing that Gilliland[1] has termed "sociability"? Gilliland[1] suggests that his test may be measuring social intelligence. A part of Gilliland's test, namely, the questionnaire, which proved to be the most satisfactory of Gilliland's four tests, was given to our graduate students. The correlation between the Gilliland Sociability Test and the Moss Social Intelligence Test for thirty-two cases is r = .14 with a P. E. of .11. Whatever the two tests may be measuring, they do not seem to be measuring the same thing.

For some of the students who took the above tests, there were available scores on a very thorough general intelligence test of the usual verbal type, a test having a high reliability. The correlations between the general intelligence examination and the two measures of social intelligence are as follows:

Verbal intelligence with Social Intelligence (Moss)
r = .68 n = 33
Verbal intelligence with Sociability (Gilliland)
r = .12 n = 19

So far as we can draw any conclusions from these few results, it would seem as if Gilliland's Sociability and the Moss Social Intelligence are rather different things. Moss's test would seem to be giving the same sort of a measure as the usual verbal intelligence test, while Gilliland's "sociability" seems to have little in common with it. Which is giving us a measure of social intelligence, it is impossible to say. If the Moss test is really a measure of social intelligence, then the relatively high correlation between verbal and social intelligence for a very selected group of graduate students would seem to suggest a high correlation between social and verbal or abstract intelligence in general.

In addition to the above tests, an association test of the "community of ideas" type[2] was given to forty-eight of these same graduate students. Scoring the test on the basis of the number of common responses, these results were correlated with the scores on the Moss Social Intelligence Test. The coefficient of correlation is .04. This "community of ideas" test is a very rough measure of the tendency to give common rather than individual responses, and as it exists at present very unreliable, the correlation between the first half of the list and the second half being only .38.

This brief excursion to find out whether the Moss Social Intelligence Test has any relation to other possible measures of sociability has been unsuccessful. The other measures are probably very unreliable. All that we have found is that the Moss Test correlates fairly well with a reliable intelligence test of the usual abstract verbal type. Does this mean that it is measuring this type of ability or that social and abstract intelligence are so closely correlated that it is unprofitable to attempt to discriminate between them?

R. PINTNER,
C. C. UPSHALL

TEACHERS COLLEGE,
COLUMBIA UNIVERSITY

[1] Gilliland, A. R., and Burke, R. S. "A Measurement of Sociability," *J. of Appl. Psych.*, 1926, 10, 315–326.

[2] Pintner, R. "Community of Ideas," *Psychol. Rev.*, 1918, 25, 402–410.